

## IMPRESSIONS OF GRAND MANAN BIRD LIFE

BY OLIN SEWALL PETTINGILL, JR.

Grand Manan is one of those water-hugged bits of coastal terrain that has become, because of its bird life, a name permanently enshrined in the annals of ornithology. Like Cobb Island, Bird Rock, and Bonaventure, it has long been a "place to be seen" to many a bird enthusiast. John James Audubon visited Grand Manan and some of its outlying islands in 1833 and later wrote <sup>1</sup> of the great numbers of certain avian inhabitants. T. M. Brewer<sup>2</sup>, Henry Bryant<sup>3</sup>, Harold Herriek<sup>4</sup>, and R. F. Pearsall<sup>5</sup> journeyed there and composed the first lists and ornithological accounts of the region. In recent years many ornithologists have included Grand Manan in their itineraries and, while not publishing extensive treatises on studies made there, have remarked in various natural history journals of the abundance of certain species and the unexpected appearances of birds beyond their normal range.

Grand Manan is an island which unhesitatingly appears out of the strong tides at the mouth of the Bay of Fundy. It lies directly off the coast of New Brunswick at its junction with Maine. Politically it is a part of Charlotte County, New Brunswick, and is approximately fifteen miles long and six miles in greatest width. Its particular scenic features are the bold northern and southern headlands, each adorned with shining white lighthouses; fjordlike Dark Harbour that breaks up the near-regularity of its western shore of otherwise red-colored, sheer two-hundred-foot cliffs; the low eastern coast notched by numerous snug harbors that are, in turn, surrounded by homelike villages of 2500 fisherfolk; outlying rock-ribbed, spruce-tufted islands: treacherous, tide-covered ledges; and cold thundering surf.

For so small an area—small, at least, beside the great continent that can be viewed from its western shore—Grand Manan has a remarkably long list of birds to its credit. This has been due not so much to the ornithologists who have visited it during the past fifty years as to the inspired work of two residents of the island, Mr. Allan L. Moses and his father, Mr. John R. Moses. Both keen observers and discriminating collectors, as well as skilled taxidermists, these two gentlemen have in their possession a collection of beautifully mounted birds. At the present time the younger Mr. Moses has these specimens

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<sup>1</sup>1835. Ornithological Bibliography. Vol. III.

<sup>2</sup>1852. Boston Journ. Nat. Hist. Vol. VI, pp. 297-308.

<sup>3</sup>1857. Proc. Boston Soc. Nat. Hist. Vol. VI, pp. 114-123.

<sup>4</sup>1873. Bull. Essex Inst. Vol. V, pp. 28-41.

<sup>5</sup>1879. Forest and Stream. Vol. XIII, pp. 524-525.

on display in a small house set aside as a museum at the village of North Head. Already several well-known ornithologists have worked over this collection. Not only is the collection representative of the island but it also contains specimens that confirm numerous records for the area. Among the rarer birds to be seen are a Yellow-crowned Night Heron, Black Skimmer, Scissor-tailed Flycatcher, Black Tern, Marsh Wren (subsp.?), Chestnut-collared Longspur, Lark Bunting, two Lark Sparrows, Red-eyed Towhee, and Lapwing.

It is said that Grand Manan and fog are synonymous. It was only fitting, then, that my first near-view of Grand Manan should be through a vista of fog. This view I obtained on the morning of May 31, 1935, from the motorship "Grand Manan II" on which I was arriving with duffel and car. Faintly at first and then distinctly I saw the imposing cliffs of Seven Days' Work. In a few moments they were absorbed by the fog and Grand Manan was not seen again until the vibrating hull of the ship rounded Swallow Tail Light and nosed into North Head. My visit to Grand Manan continued until July 22, during which time I attempted to cover as much of the island as possible and to visit diversified habitats. I have Mr. Allan Moses to thank for placing me in touch with places frequented by species that I might have overlooked otherwise.

Faunistically Grand Manan is Canadian Zone of the C. Harte Merriam pattern. The central and western portions of the island are for the most part richly timbered with spruce, save on the outskirts where the trees become stunted. Numerous springs in the higher western region give rise to large alder-bordered streams which rush seaward along pebbled courses and sometimes filter through bogs of plushy moss and flowering shrubs. There is an ill-smelling salt marsh at Castalia that is gouged in typical fashion by tidal channels and stagnant sloughs. A few portions of the island's interior, where hardwoods occasionally predominate, are indicative of the Transition Zone, as are the vicinities of the villages where grass-covered fields, rocky pastures, and open marshlands occur.

From the very outset of my visit I could not fail to be impressed with the great abundance of certain species of land birds. The Robins and Crows were common in expected numbers as were the Cedar Waxwings, Savannah and White-throated Sparrows, and Slate-colored Juncos. But in no other region have I seen the Black-throated Green Warblers so common. During the first week of my visit I accounted for their conspicuous numbers by the fact that the migration wave was not yet over. Parula and Blackpoll Warblers were still common



FIG. 20. Yellow-bellied Flycatcher on its nest. Dark Harbour, July 5, 1935.



FIG. 21. Acadian Chickadee at the entrance to the nesting hole. Deep Cove, Grand Manan, July 18, 1935.



in areas where it seemed apparent they would not remain. But, by the end of June, the Black-throated Green Warblers were still ubiquitous in every type of wooded area whereas the Parulas were now scatteringly few and the Blackpolls had resorted to the exposed and stunted spruces at the northern and southern headlands. I found one nest of the Black-throated Green Warbler far up in a spruce in comparatively open country, another in a low hardwood shrub in deep woods, and observed young on two occasions in an extensive alder swale. Almost as impressive in numbers were the Redstarts, Nashville Warblers, Northern Yellowthroats, and Olive-backed Thrushes. Though requiring a more specialized type of tree association, their numbers were noticeable in areas where they existed.

About the villages the swallows unquestionably predominated in numbers. While these birds are known to frequent coastal regions in considerable numbers anyway, here man has both intentionally and unintentionally provided excellent nesting sites to further encourage this habit. The residents in the villages have taken an exceptional interest in providing small bird houses suitable for the Tree Swallows. At Seal Cove each door yard averaged five of these bird houses. Only a few were without them, while many possessed over a dozen. In one door yard I counted sixteen houses, nine of which were occupied. At a glance I believed some of the houses were not spaced far enough apart to allow each pair of birds ample territory and were not, in certain instances, placed high enough off the ground. The locations apparently made little difference. Two pairs occupied boxes scarcely six feet apart; one pair lived in a box five feet from the ground. The Barn Swallows have taken advantage of the peculiar structure of the fish smokehouses. In these buildings the apices of the roofs are open and covered with superimposed roofs. Through these openings the swallows gain admittance into the otherwise closed buildings and place their nests on the roof supports and fish racks. Unfortunately the smokehouses are so constructed as to allow scarcely any eaves. Thus the Cliff Swallows are deprived of the use of these buildings. Nevertheless, the species is present in numbers that would be expected in coastal communities, using the suitable eaves of barns and dwelling houses that are available. Where the sea has recently encroached upon the low-lying eastern shore of Grand Manan, the soil has been cut away leaving large gravel banks which seem especially suited to the nesting needs of the Bank Swallow. However, I found no more than a dozen pairs in all the available places. According to the residents of the island who live near these banks, the species has decreased

markedly during the last five years, once being a very common bird.

In spite of the abundance of some species, there were a few Canadian Zone birds whose presence I failed to note. I saw no Canada Jays and missed the Spruce Partridge and Tennessee Warbler. These species Mr. Allan Moses has never seen though he has been on the watch for them for many years. I noted but one Blue Jay. Other species that I expected to find common, such as the Brown Creepers, Pine Siskins, and Canada Warblers, were not observed.

No large family of birds was better represented on Grand Manan than were the flycatchers. Pairs of Kingbirds were frequently observed along the roadsides of the eastern side of the island. At Seal Cove I saw one Phoebe at intervals during the breeding season. On June 6 I heard two Wood Pewees on the road to Dark Harbour and from June 5 to June 17 I found the Olive-sided Flycatcher in different sections of the island. Since both the Wood Pewees and Olive-sided Flycatchers were not noted again as the season advanced, they were apparently on migration. On June 13 Mr. Allan Moses collected the first Least Flycatcher he had ever seen on Grand Manan. I saw another on July 2. Nearly every cluster of alders of any size was found inhabited by at least one pair of Alder Flycatchers. In the deep woods of the central and western portion of Grand Manan I sometimes noted the Yellow-bellied Flycatcher. I found a nest of the species in the process of construction on June 8 and followed it through the season until the young left the nest on July 13.

This habitat of the Yellow-bellied Flycatcher was typical of the richly wooded area of Grand Manan. Huge yellow birches and thickly growing spruces darkened the forest floor of cool moss. Lichens bearded the decaying stumps and rotting underbrush. Almost beside the Yellow-bellied Flycatcher nest that was hidden beneath a maple root, a spring-fed rivulet trickled over a leaf-soaked bed. From the nest side I recorded at one time or another, the following species: Black-throated Blue Warbler, Black and White Warbler, Winter Wren, Redstart, Parula Warbler, Oven-bird, Red-eyed Vireo, Golden-crowned Kinglet, Black-throated Green Warbler, and Bay-breasted Warbler.

Both the Black-capped Chickadee and Acadian Chickadee were on Grand Manan in almost equal numbers. Most of my attention was directed to the more northern form since it was a species entirely new to me. A study of it soon proved to my own mind that it was not unlike its darker relative in habits. The first nest that I found contained six well-grown young. In an attempt to find out if this species was capable of feeding its young as many times as the Black-capped

Chickadee has been found to do, a continuous all day observation was made at the nest side. The pair fed their young 365 times during the day. Between 6 o'clock and 7 o'clock in the morning they fed their young thirty-nine times. No observation blinds were necessary as they permitted the onlooker to stand directly beside their nest while they carried on their feeding.

On Grand Manan's extensive salt marsh at Castalia I found nesting approximately a dozen pairs of Acadian Sparrows. I noted as many as four males singing in the air at one time. Each began his flight performance by rushing several feet skyward, and then sailed abruptly earthward, giving, during the descent, a suggestion of a song, though it resembled more the sizzling sound made when a cap is slowly removed from a bottle of ginger ale. A severe rain accompanied by strong northeast winds caused the marsh to be flooded during the middle of June by excessive high tides. A visit here two days after the disaster revealed that three nests of this species and several of the Savannah Sparrow had been completely washed out, the eggs appearing in the grass, some of them broken, others intact. Probably all of the nests in the marsh were wiped out at this time.

The predatory birds seemed to be comparatively few at Grand Manan. Of the hawks, only the Marsh Hawk was frequently seen. These birds apparently nest in some of the isolated bogs of the island's interior. Two nests of the year were reported to me and I found a last year's nest near Little Pond. I observed the Sharp-shinned Hawk twice, and the Osprey ten times, finding a nest of the latter at Miller's Pond. I discovered the nesting locality of a pair of Sparrow Hawks and found a nest of the Broad-winged Hawk.

Occasionally a few Ravens were seen moving along the shores. At Deep Cove a nest of a white domestic duck was robbed twice by Ravens during the course of the season. One pair of Ravens nested earlier in the season on Outer Wood Island and another pair at Southern Head. Both nests were destroyed by human hands before the eggs hatched.

It was particularly gratifying to find Grand Manan a region where I could safely call the Woodcock common. On the first evening of my visit I walked along the road at Deep Cove which runs along beside the ocean and counted ten birds going through their flight songs. These sounds already familiar to me, when mingled with the rush of the surf, presented a strange new combination of beauty. Subsequent trips through the numerous marshy alder-covered swales and even in the thick forests were usually featured by flushing at least one, some-



FIG. 22. Atlantic Puffins on their nesting grounds at Machias Seal Island, July, 1932.



FIG. 23. Black Guillemot hesitating a few seconds after emerging from its nest located in the crevices in the rocks. Kent's Island, July 11, 1935.



times as many as five birds. Five broods were reported to me during the season.

It is probably the diversity of sea birds on the outlying islands that brings Grand Manan its particular distinction ornithologically. American Eiders nest on Three Islands and Little Wood Island. It has been estimated by the Bowdoin Biological Station located on Kent's Island (one of the Three Islands) that approximately 250 pairs nest here. On several islands are colonies of the Black Guillemot totaling about 430 pairs. Of the burrows of the Leach's Petrel, approximately 27,500 have been counted. A few Great Black-backed Gulls nest on Three Islands and Little Wood Island, undoubtedly no more than twenty-five pairs. The Herring Gull population of all of these islands is estimated at 22,500 pairs. On the Yellow Murre Ledge nest 100 pairs of the Razor-billed Auk.

Fifteen miles to the south of Grand Manan lies Machias Seal Island—the southernmost breeding ground of the Atlantic Puffin. In a visit made here in 1932, I estimated 400 pairs of birds. In 1935 I believed the numbers to be the same. From reports made in ornithological journals, it would appear that the numbers have remained almost constant for at least twenty years. In addition to the puffins, there are over 2,000 pairs of Arctic Terns, 50 pairs of Common Terns, and 2,000 burrows of Leach's Petrel.

That many of these islands are overpopulated with Herring Gulls, there can be no question. In fact, I saw several instances where I believed individuals were forced to seek nesting sites not used in previous years. On the ledge directly off the shore of Machias Seal Island, where formerly only terns were known to nest, six Herring Gull nests were built. On the Castalia marshes I observed two Herring Gulls that protested my presence vociferously whenever I approached within a certain area. From their behavior I believed this area to be selected nesting territory, though no nests nor eggs could be found. Mr. Allan Moses has never known the Herring Gulls to nest here. On Nantucket Island Mr. Moses and I estimated approximately 250 pairs of birds. During the previous breeding season Mr. Moses estimated the pairs nesting there to be under a hundred. Only the Machias Seal Island could I foresee any serious effect of the Herring Gulls on the other bird life. Here, unless the species is checked, the terns will be driven away. This seems deplorable as the island constitutes the only nesting colony of the Arctic and Common Tern in the vicinity of Grand Manan.



For a greater diversity of bird life, one could not ask for a better place than Grand Manan and the islands in its immediate vicinity. Probably there are no new forms to be discovered here. Nearly all the birds occurring in Northeastern North America have at some time or another been recorded. Nevertheless, Grand Manan has still many opportunities to offer ornithologists desiring to make field studies of particular species. There are birds in abundance and there are the facilities of the Bowdoin Biological Station on Kent's Island—a place we strongly hope will soon become a Barro Colorado or Tortugas of the Northeastern Atlantic coast.

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## NOTES ON THE SUMMER AND FALL BIRDS OF THE WHITE MOUNTAINS, ARIZONA

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Between June 23 and July 24, 1933, a party representing the San Diego Society of Natural History collected birds and mammals in the White Mountains, Apache County, Arizona. The personnel comprised Karl Kenyon, Turlington Harvey III, Samuel G. Harter, and the writer. The writer later returned during his vacation and spent from September 28 to October 5, 1933, in the same locality. Following is a list, with notations, of the birds collected or observed, with a brief description of this interesting region.

The White Mountains are situated near the center of the eastern boundary of Arizona and form the highest part of the eastern end of the great Mogollon Plateau. Our summer camp was situated on the north fork of the White River, at an altitude of 8200 feet, and from this point we radiated on foot in all directions for a distance of three or four miles. On three occasions, by machine and on horse-back, greater distances and higher elevations were reached.

The rushing mountain stream that passed our camp-site—often referred to as "the creek"—ran in an east to west direction and was bordered with birches, alders, and low willows. To the south, Mount Ord and Mount Baldy rose to elevations of over 10,000 feet. During our summer visit, each retained a low bank of winter's snow on the north slope of their crests. A dense forest of spruce clothed these northerly slopes, and where fires had burned through this forest, pure stands of aspen had filled in. To the north of the river, the country was a gentle sloping plateau, chiefly forested with yellow pines. Grassy